

research highlights

ENERGY TECHNOLOGY

The balance of perceptions

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Smart home technologies (SHTs) enable monitoring and control of domestic appliances and allow us to configure many aspects of our environment, offering unprecedented options for energy management. Governments are increasingly turning to SHTs as a way of giving energy consumers greater choice and flexibility over their energy usage, enhancing their engagement with the energy system and hopefully making it more efficient, reducing demand and shifting peak load. For marketing and policy to improve the rates of implementation of SHTs, it is important to understand how users perceive them. Towards that end, Charlie Wilson, Tom Hargreaves and Richard Hauxwell-Baldwin from the University of East Anglia, UK, survey prospective and actual users of SHTs in the UK and compare the findings to an analysis of industry marketing materials.

The researchers use a national survey of homeowners to characterize potential users' perceived benefits and risks of SHTs. They find that SHTs are generally considered to be potentially beneficial, although there are also perceived risks in giving over autonomy to and increasing their dependence on technology. From a field trial of SHTs, the researchers also find that early adopters' perceptions of benefits strengthen as they learn more about SHTs, although their perception of the risk isn't significantly weakened. Finally, analysis of marketing materials shows that while most of the benefits emphasized by industry align with user perceptions, there is a disconnect between user perception of risk and industry emphasis on risk-mitigating measures. The researchers suggest that consumer confidence around issues like privacy and data security requires more attention from industry and policy-makers if they want to increase the up-take of SHTs.

Nicky Dean